

# *La Costa Avenue Interim Striping Plan*

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# *La Costa Avenue*

## *El Camino Real to Rancho Santa Fe Road*



# *Background Information*

- La Costa Avenue designed in 1962 by County
- Road annexed to City of Carlsbad in 1972
- City subsequently changed lanes, parking and medians
- Prevailing speed (critical speed) has consistently been between 45-50 mph



# *Critical Speed vs. Speed Limit*

Year	Prevailing Speed	Speed limit	Note
1977	50+	45	City establishes speed limit
1987	51	45	
1988	50	45	Painted median, on-street parking
1992	49	45	
1997	49	45	
1999	47	45	
2003	48	45	New Caltrans Directive= un-enforceable speed limit
2011	47	45	Temporary measures= enforceable speed limit



# *Defining the Problem*

- 2008 collision involved driver exiting driveway near Calle Madero and westbound motorcycle
- Court rejected City's claim to design immunity
- Court determined there was a dangerous condition
- Plaintiff's expert emphasized that sight distance does not meet posted speed limit



# *Interim Safety Improvements Project Objective*

- Reasonable measures need to be implemented in a reasonable timeframe to address these traffic safety issues
- Improve sight distance from residences
- Change the character of the road
- Regain City's design immunity



# *Previous City Council Action*

- Approved installation of warning signs
- Approved installation of speed feedback signs
- Directed staff to prepare an interim striping plan that included on-street parking
- Funded La Costa Avenue Improvement Project



# *La Costa Ave Improvement Project*

## *Project Objective*

- Develop a cost effective, community-preferred plan to address traffic speeds and safety on La Costa Avenue in a way that respects the residential character and arterial function of the roadway



# *Why Not Simply Implement Long-Term Solution?*

- Some stakeholders support “Do Nothing”
- Potential impacts of permanent improvements need environmental review
- Plan requires changes to General Plan



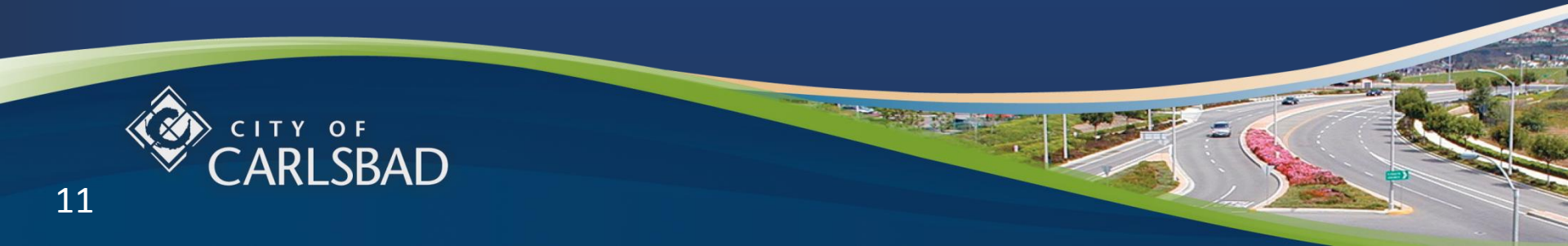
# *How Interim Striping Plan was Revised by Public Workshop*

- General agreement that safety should be improved for residential driveway access
- Serious concerns that reducing number of lanes would create congestion
- Several requests to reduce scope of interim striping plan
- Staff developed the “hybrid” design



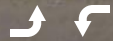
# *The Hybrid Alternative:*

- Leaves eastbound lanes in current configuration
- Limits project scope to westbound lanes with direct access to residential units
- Converts second westbound travel lane into bike lane between Romeria Street and Fairway Drive



# Existing Signing and Striping Conditions

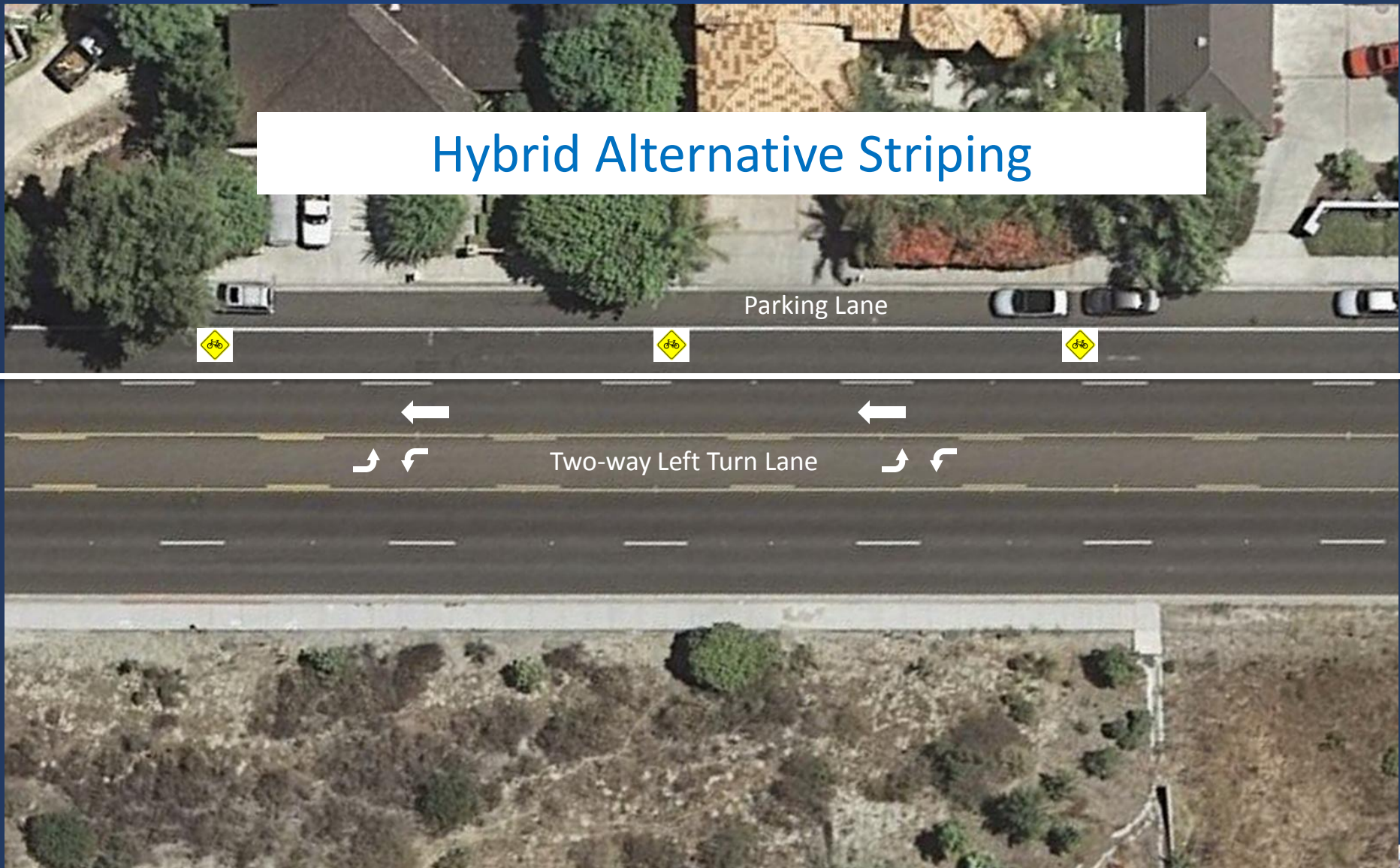
Parking Lane



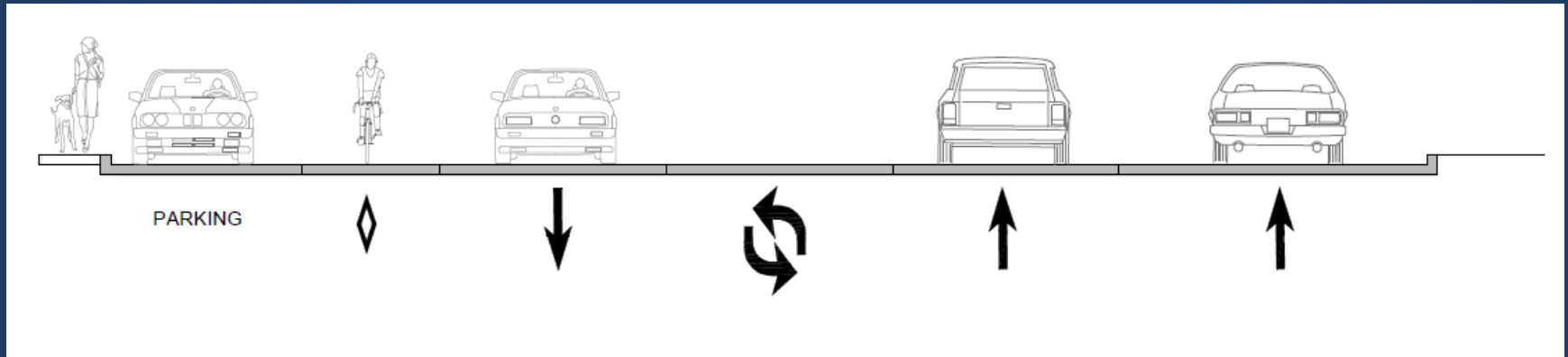
Two-way Left Turn Lane



# Hybrid Alternative Striping



# Hybrid Alternative Cross Section



# *La Costa Avenue*

## *Preferred Alternative Extents*



# *Preferred Alternative Benefits*

- Increases driver visibility from driveways
- Maintains some on-street parking
- May reduce vehicle speed
- Limited scope minimizes traffic impact
- Reasonable approach for interim solution



# *Level Of Service Findings*

- Signalized intersections meet level of service standard (LOS=D) for existing and forecasted conditions.
- Mid-block roadway segment meet level of service standard (LOS=D) for existing and forecasted conditions.



# *Intersection LOS Summary*

## *ICU Method (AM/PM)*

Intersection	Existing Conditions		Forecasted Traffic	
	Current Configuration	“Hybrid Alternative”	Current Configuration	“Hybrid Alternative”
Viejo Castilla	A/A	A/A	A/A	B/A
Romeria St	A/A	A/A	A/A	A/A
Cadencia St	A/A	A/A	A/A	A/A



# *Mid-Block LOS Results (AM/PM)*

## *West of Nueva Castilla Way*

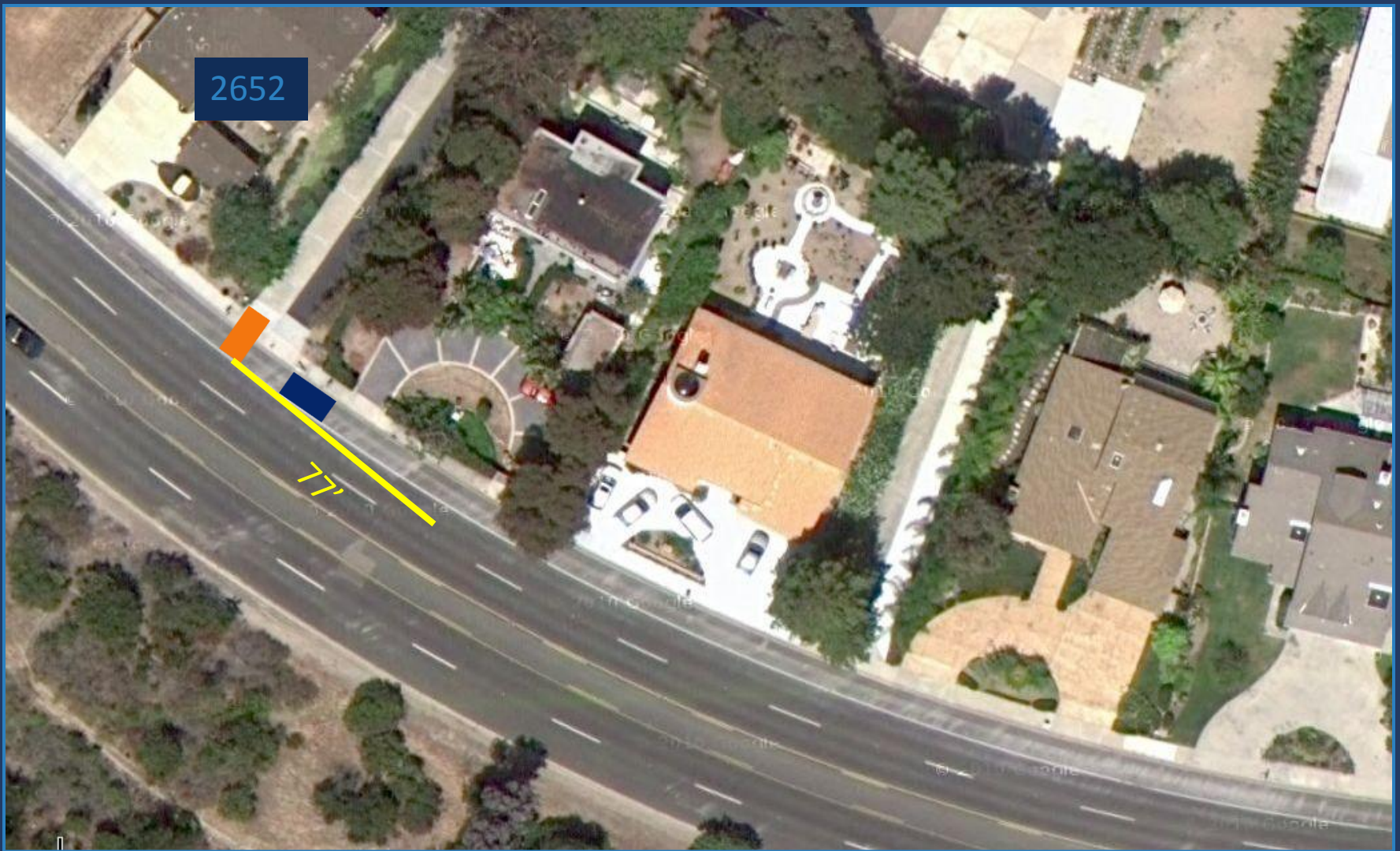
Alternative	Current LOS	Forecasted LOS (AM/PM)
Current Configuration	A/A	A/A
“Hybrid” Alternative	A/A	B/A



# *City of Carlsbad Street Design Criteria*

Road Classification	Design Speed (mph)	Stopping Sight Distance (ft)
Collector Street	30	200
Secondary Arterial	40	300
(45 mph critical speed)	45	360





Driver pulls out to edge of existing travel lane vehicle parked 5 feet from driveway





Driver pulls out to edge of proposed bike lane vehicle parked 5 feet from driveway





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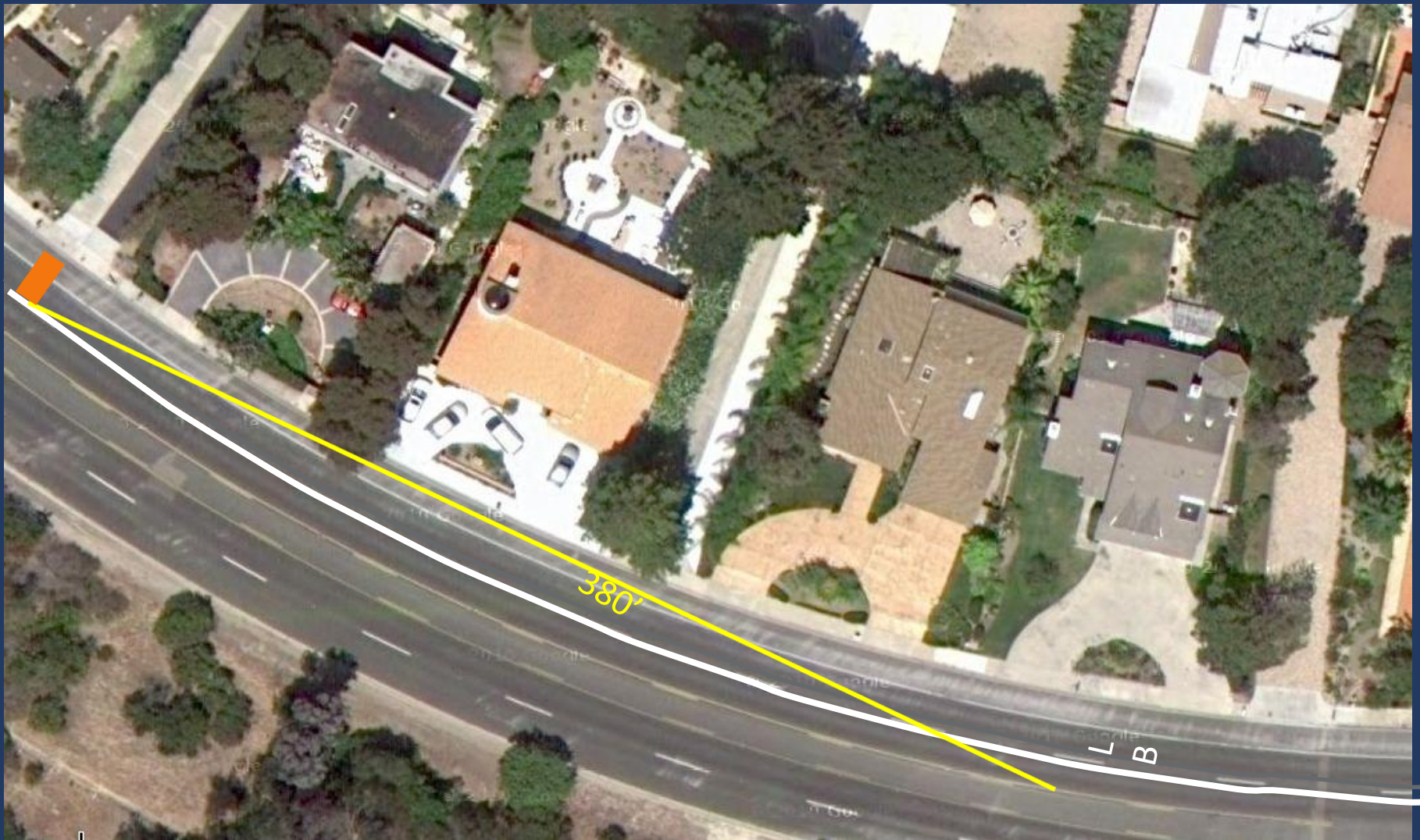
Driver pulls out to edge of proposed bike lane vehicle parked 55 feet from driveway





Driver pulls out to edge of travel lane No On-Street Parking





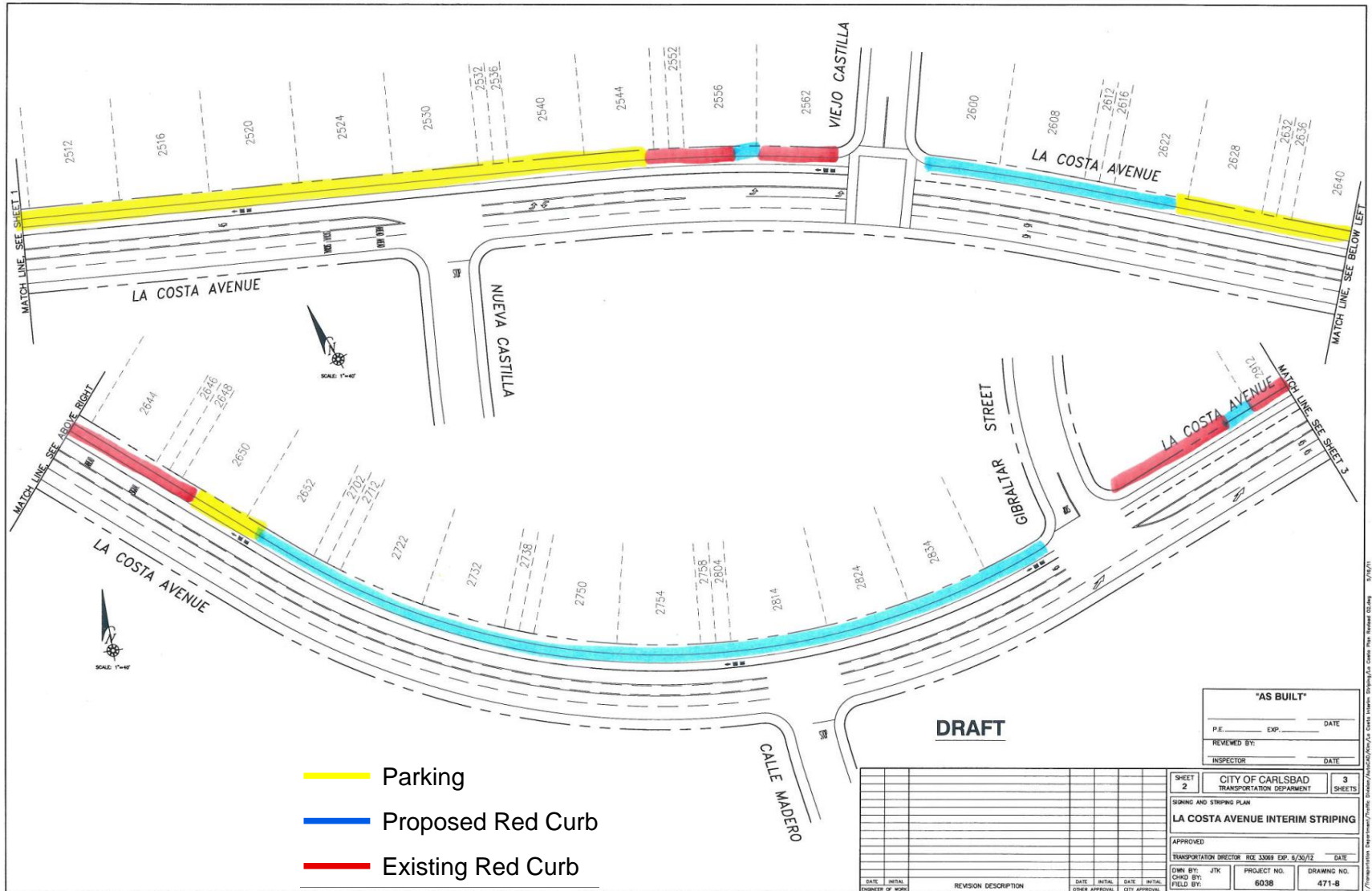
Driver pulls out to edge of proposed bike lane No On-Street Parking



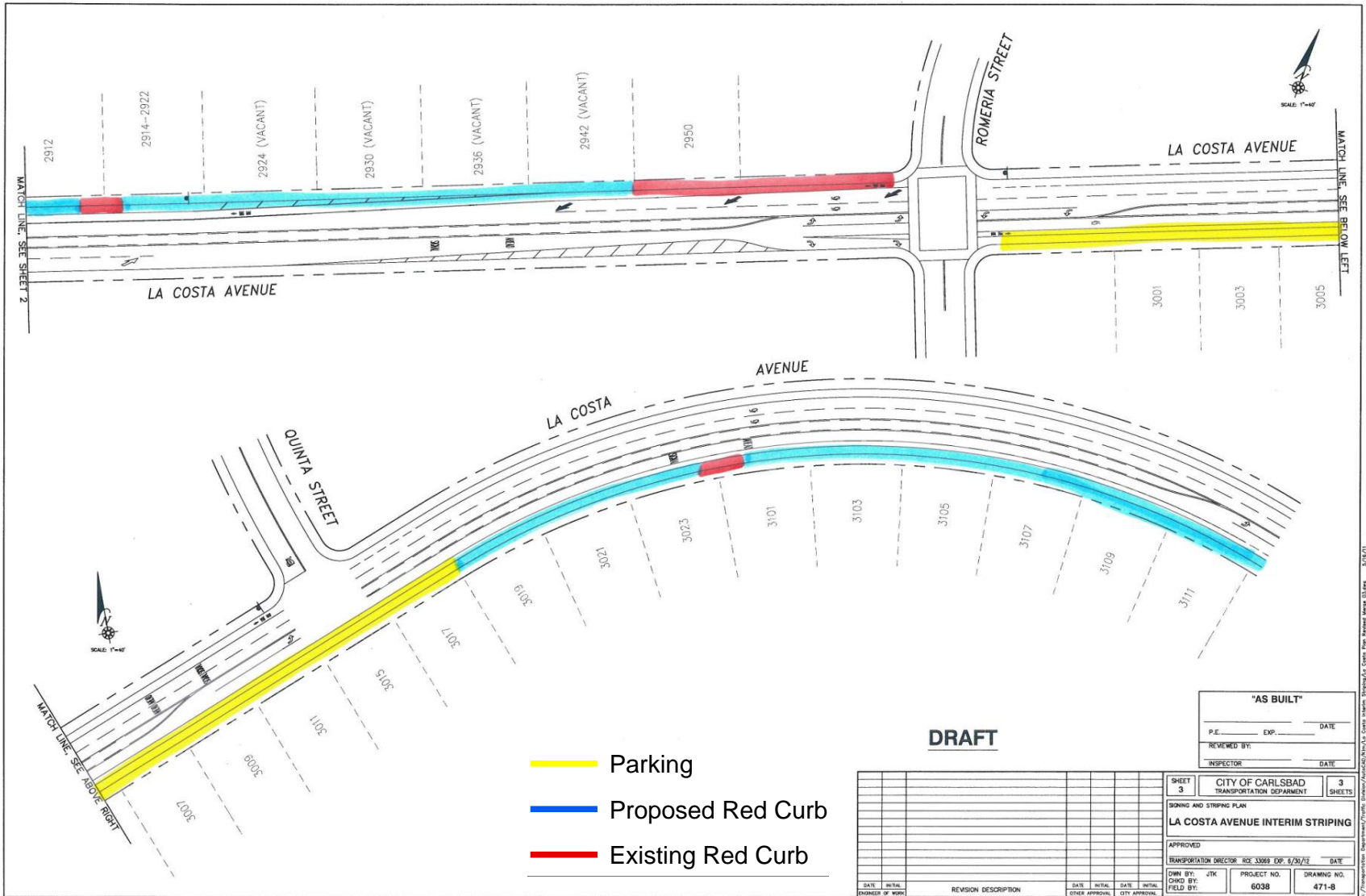
## 27



## 28



## 29

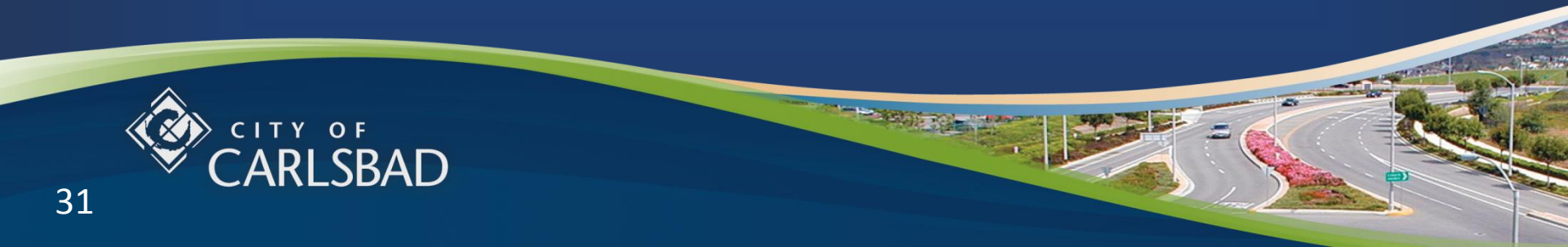


# Summary

- It is necessary, desirable and in public's best interest to improve driver visibility where there is direct access to residential driveways
- City installed warning signs and speed feedback signs to reduce speed, but did not resolve sight distance issue
- Restricting on-street parking improves visibility, but does not fully resolve traffic safety issue
- The Hybrid Alternative is a reasonable approach without significant environmental impact



# *Questions*



# Travel Time Study

La Costa Avenue

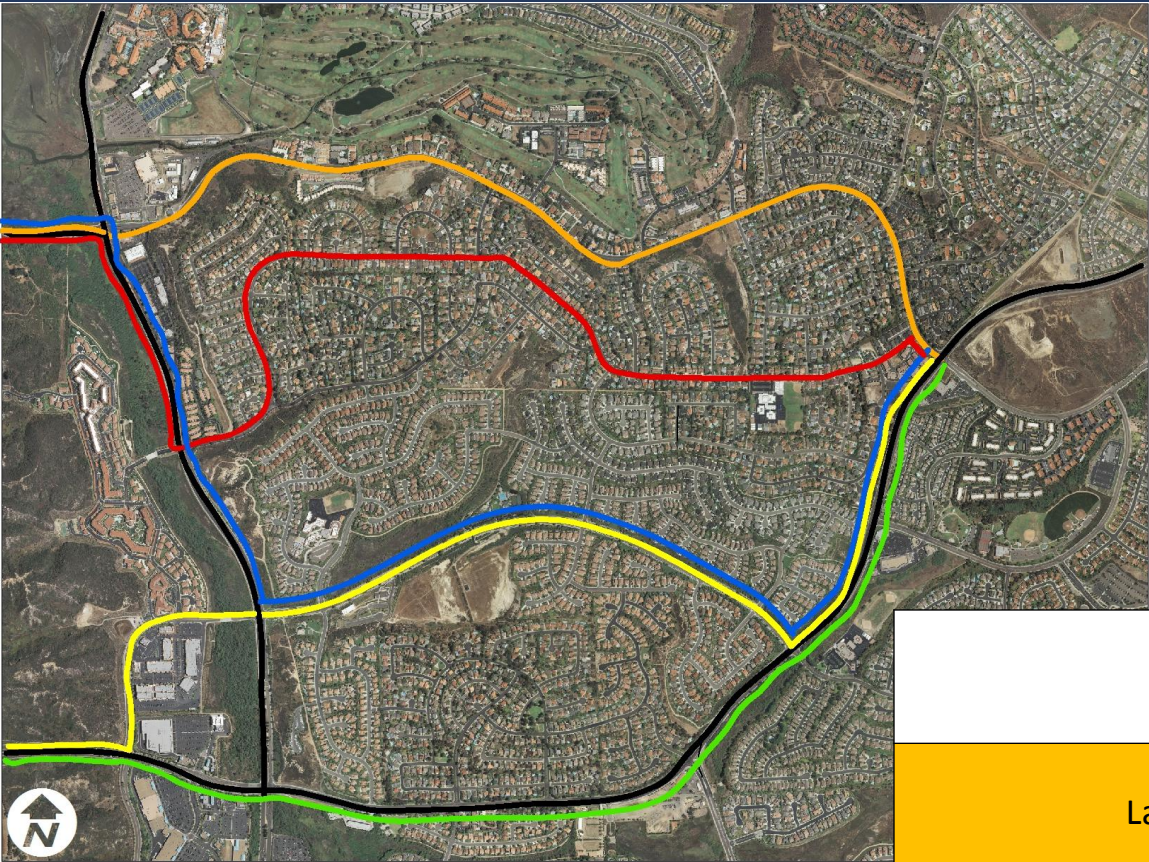
Levante Street

El Camino Real

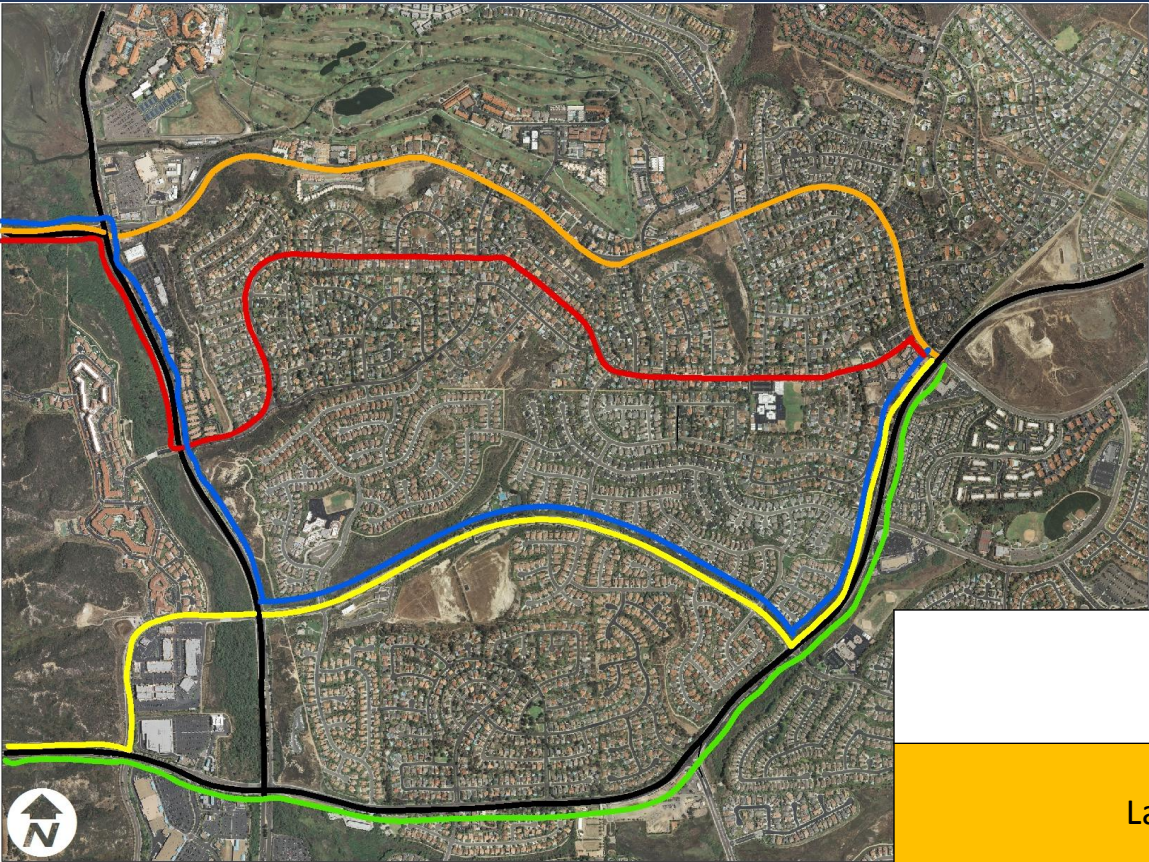
Calle Barcelona

Rancho Santa Fe Road

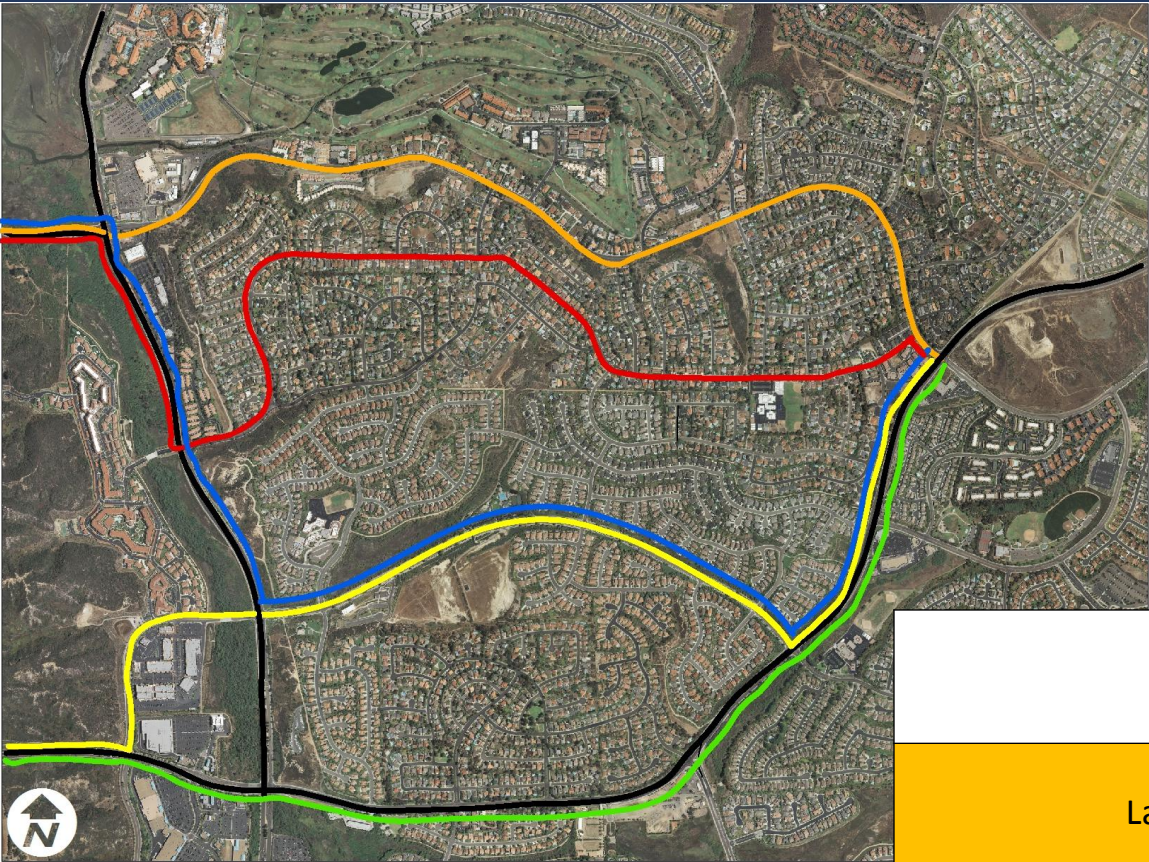




Direction & Route	Off-Peak Total Time
La Costa Avenue to I-5	7 min
Calle Barcelona to Leucadia to I-5	7 min
Rancho Santa Fe Road to Leucadia to I-5	7 min
La Costa to Calle Barcelona to La Costa to I-5	7 min
La Costa to Levante to I-5	8 min



Direction & Route	AM Peak Total Time
La Costa Avenue to I-5	7 min
Calle Barcelona to Leucadia to I-5	7 min
Rancho Santa Fe Road to Leucadia to I-5	8 min
La Costa to Calle Barcelona to La Costa to I-5	9 min
La Costa to Levante to I-5	11 min



Direction & Route	PM Peak Total Time
La Costa Avenue to I-5	7 min
Calle Barcelona to Leucadia to I-5	9 min
Rancho Santa Fe Road to Leucadia to I-5	8 min
La Costa to Calle Barcelona to La Costa to I-5	10 min
La Costa to Levante to I-5	11 min